

WHAT IS CLAIMED IS:

1. A fabric interconnect system (1) comprising:

a connector (10) with at least two perforated layers (20) of material with one or more perforations (22); and

5 one or more flexible layers (30) of material with one or more jutting fibers (32),

wherein said jutting fibers (32) are appropriate to engage said at least two perforated layers (20).
2. The fabric interconnect system (1) of claim 1, wherein at least one of said at
10 least two perforated layers (20) has at least two conductive portions (24).
3. The fabric interconnect system (1) of claim 2, wherein said connector (10) has one or more biasing elements (14) for biasing said at least two conductive portions (24) relative to each other.
4. The fabric interconnect system (1) of claim 3, wherein said connector (10)
15 has one or more actuators (16) for selectively positioning said at least two conductive portions (24) relative to each other.
5. The fabric interconnect system (1) of claim 4, wherein said one or more actuators (16) and said one or more biasing elements (14) are operatively connected via said at least two conductive portions (24).

6. The fabric interconnect system (1) of claim 5, wherein one or more perforations (22) of said at least two perforated layers (20) are misaligned with respect to each other when said one or more biasing elements (14) are in a relaxed state.
- 5 7. The fabric interconnect system (1) of claim 6, wherein said one or more perforations (22) of said at least two perforated layers (20) are selectively aligned with respect to each other via said one or more actuators (16).
8. The fabric interconnect system (1) of claim 7, wherein said connector (10) can be securely connected to said one or more flexible layers (30) of material by
10 activating said one or more actuators (16) to align said one or more perforations (22) of said at least two perforated layers (20), bringing said connector (10) into contact with said one or more flexible layers (30) of material such that said jutting fibers (32) engage said aligned perforations, and deactivating said one or more actuators (16) such that said one or more perforations (22) are misaligned via said
15 biasing element.

9. A fabric connector (10) comprising:

two or more perforated layers (20) of material at least one of which having
two or more conductive portions (24);

one or more biasing elements (14) operatively connected to said two or
5 more conductive portions (24); and

one or more actuators (16) operatively connected to said one or more
biasing elements (14) and/or said two or more conductive portions (24).

10. The fabric connector (10) of claim 9, wherein said one or more biasing
elements (14) bias said two or more conductive portions (24) to a first position
10 relative to each other.

11. The fabric connector (10) of claim 10, wherein a force applied to one or
more actuators (16) selectively biases said two or more conductive portions (24) to
a second position relative to each other.

12. The fabric connector (10) of claim 11, wherein said one or more
15 perforations (22) of each said at least two or more perforated layers (20) of material
are misaligned in said first position.

13. The fabric connector (10) of claim 12, wherein said one or more
perforations (22) of each said at least two perforated layers (20) are aligned in said
second position.

14. The fabric connector (10) of claim 13, wherein said at least two or more perforated layers (20) of material each have one or more perforations (22) that are appropriate to accommodate one or more protruding fibers (32) of a second material.

5 15. The fabric connector (10) of claim 14, wherein said connector (10) can be securely connected to said second material.

16. The fabric connector (10) of claim 15, wherein said protruding fibers (32) are grouped into two or more predefined areas (34).

10 17. The fabric connector (10) of claim 16, wherein said two or more predefined areas (34) are insulated from each other.

18. The fabric connector (10) of claim 17, wherein said protruding fibers (32) of said predefined areas (34) are conductive and in electrical communication with a power supply.

15 19. The fabric connector (10) of claim 18, wherein said power supply is a direct current (DC) power source.

20. The fabric connector (10) of claim 18, wherein said protruding fibers (32) can engage said one or more perforations (22) when said one or more perforations (22) of each said at least two perforated layers (20) are aligned, and wherein said protruding fibers (32) of said predefined conductive areas and said one or more
5 perforations (22) of said two or more conductive portions (24) can be mechanically and electrically connected when said one or more perforations (22) of each said at least two perforated layers (20) are misaligned.